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## WHAT IS CLAIMED IS:

- 1. A method of producing a ligand:receptor complex, comprising contacting:
- a) a substantially pure or recombinant mammalian IL-1 $\delta$  or IL-1 $\epsilon$  with a receptor comprising the IL-1R6 receptor subunit; or
  - b) a mammalian IL-1 $\delta$  or IL-1 $\epsilon$  with a receptor comprising a substantially pure or recombinant IL-1R6 receptor subunit;

thereby allowing said complex to form.

- 2. The method of Claim 1, wherein:
  - a) said complex results in modulation of NFkB activation;
  - b) said receptor is on a cell;
  - c) said complex formation results in a physiological change in the cell expressing said receptor;
  - d) said contacting is in combination with an antiinflammatory agent; or
  - e) said contacting allows quantitative detection of said ligand.
- 3. The method of Claim 2, wherein said receptor is on a 25 skin cell.
  - 4. A method of modulating physiology or development of an IL-1R6 receptor expressing cell comprising contacting said cell to an exogenous agonist or antagonist of a mammalian IL-  $1\delta$  or IL-1 $\epsilon$ .
  - 5. The method of Claim 4, wherein:
    - A) said antagonist is:
      - 1) an antibody which:

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- a) neutralizes said mammalian IL-1 $\delta$ ; or
- b) neutralizes said mammalian IL-1&; or
- 2) a mutein of said IL-1 $\delta$  or IL-1 $\epsilon$ ;
- B) said physiology is selected from:
  - 1) proliferation;
  - 2) tissue remodeling; or
  - 3) production of inflammatory mediators, including cytokines, chemokines, or adhesion molecules; or
- 10 C) said modulating is specific for epithelial cells and not endothelial cells.
  - 6. The method of Claim 4, wherein:
    - a) said antagonist is an antibody and said physiology is an inflammatory response; or
    - b) said modulating is specific for Th2 cells and not Th1 cells.
- 7. The method of Claim 4, wherein said modulating is blocking, and said physiology is an inflammatory response.
  - 8. A method of modulating a signal to a cell mediated by IL-1 $\delta$  or IL-1 $\epsilon$  comprising contacting said cell to an administered agonist or antagonist of IL-1R6.
  - 9. The method of Claim 8, wherein said modulating is inhibiting, and said signal is a pro-inflammatory signal.
  - 10. The method of Claim 9, wherein:
    - a) said antagonist is a neutralizing antibody to IL-1R6;
- b) said agonist or antagonist is administered in combination with an antagonist or agonist of CXCR1, CXCR2, or CCR6; or

IL-1R6.

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- c) said agonist or antagonist is administered in combination with a growth factor, cytokine, chemokine, or immune adjuvant.
- 5 11. The method of Claim 9, wherein said contacting is with another anti-inflammatory agent.
- A method of selectively labeling a population of cells, said method comprising contacting said cells with an
  IL-1R6 antibody or a cytokine selected from IL-1δ or IL-1ε, thereby resulting in the identification of cells expressing
  - 13. The method of Claim 12, wherein:
    - a) said contacting results in modulation of NFkB activation;
    - b) said labeling allows purification of IL-1R6+ cells; or
    - c) said labeling allows depletion of IL-1R6+ cells.
  - 14. A population of cells made by the method of Claim 13.
  - 15. The population of Claim 14, which:
- a) bind anti-IL-1R6 antibody or antiserum; or
  - c) are prepared by Fluorescent Activated Cell Sorting with a labeled IL-1R6 selective:
    - 1) ligand;
    - 2) antibody; or
- 3) binding compound comprising the antigen binding portion from an antibody which selectively binds IL-1R6.

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16. A method of testing a compound for ability to affect IL-1R6 receptor-ligand interaction, said method comprising comparing the interaction of IL-1R6 with IL-1 $\delta$  or IL-1 $\epsilon$  in the presence and absence of said compound.

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- The method of Claim 16, wherein said compound is an 17. antibody against IL-1R6, IL-1 $\delta$ , or IL-1 $\epsilon$ .
- 18. An isolated or recombinant polynucleotide which:
- 10 encodes at least 15 contiguous amino acid residues of a) SEO ID NO: 2:
  - encodes at least two distinct segments of at least 8 b) contiguous amino acid residues of SEQ ID NO 2;
  - comprises one or more segments at least 21 contiguous C) nucleotides of SEQ ID NO: 1;
  - encodes at least 15 contiguous amino acid residues of d) SEQ ID NO: 4;
  - encodes at least two distinct segments of at least 8 e) contiguous amino acid residues of SEQ ID NO 4; or
  - f) comprises one or more segments at least 21 contiguous nucleotides of SEQ ID NO: 3.
  - 19. An isolated or recombinant antigenic polypeptide comprising at least:
    - one segment of 12 identical contiguous amino acids a) from SEQ ID NO: 2;
      - at least two distinct segments of 8 identical b) contiguous amino acids from SEQ ID NO: 2;
      - one segment of 12 identical contiguous amino acids C) from SEQ ID NO: 4; or
      - at least two distinct segments of 8 identical d) contiguous amino acids from SEQ ID NO: 4.

20. A binding compound comprising an antigen binding portion from an antibody which binds with selectivity to a polypeptide of Claim 19.